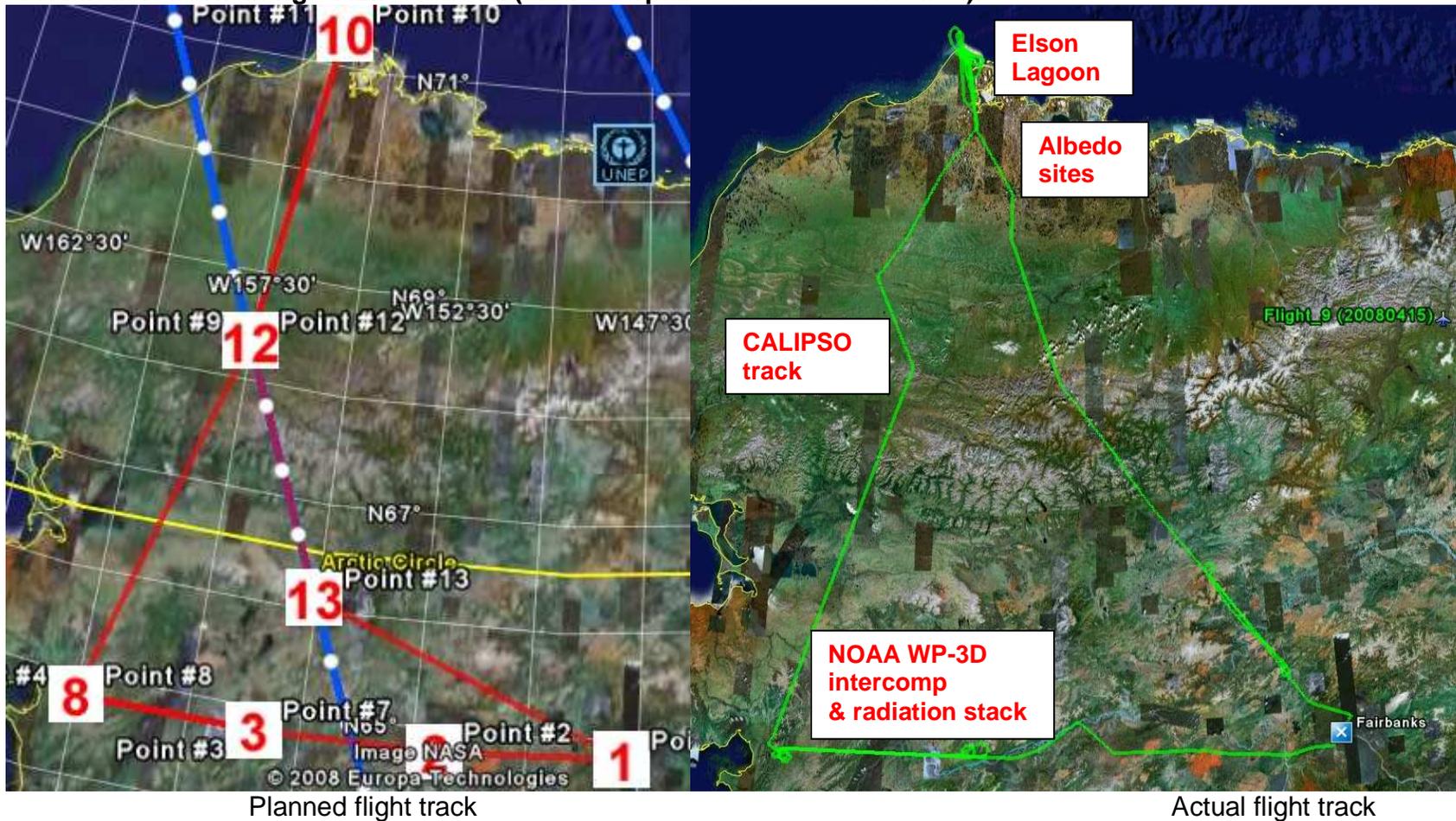


Flight Report
ARCTAS P-3B Data Flight 9, flown 15 Apr 2008
Submitted by Phil Russell

Goals:

1. Comparison w NOAA WP-3D under B200
2. Radiation stack with NOAA WP-3D under B200 (needs sufficient AOD & no hi/mid clouds).
3. Cascade impactor (J. Fochesatto) collection during 1, 2.
4. Albedo & BRDF measurements at Elson Lagoon over surface-based albedo & snow collection measurements.
5. Radiation work along CALIPSO track (after overpass unless #3 cancelled).



Takeoff 1858 UT. Land 0251 UT. A very successful flight that accomplished more than planned.

Accomplishments

1. Comparison w NOAA WP-3D under B200
2. Radiation stack with NOAA WP-3D under B200 (with sufficient AOD & no hi/mid clouds).
3. Cascade impactor (J. Fochesatto) collection during 1, 2. Will be analyzed by Raman spectroscopy & scanning electron microscope.
4. Albedo & BRDF measurements at Elson Lagoon over surface-based albedo & snow collection measurements.
5. Measurement of zero ozone over open leads N & W of Elson Lagoon, both before & after Elson Lagoon work.
6. Radiation leg along CALIPSO track (before overpass).
7. Overflights of special albedo sites F1, B3, G4(x2), B4, F4, L1 (with variety of cloud conditions).
8. Successful use of xchat & satphone to relay info from B200 & ground re cloud & aerosol conditions ahead—essential to making course decisions.
9. Extra radiation legs along return to Fairbanks
10. All “goods” of previous flight regarding performance of instruments, A/C, flight crew, ...

Instrument Reports

AATS-14

Status during the flight (up/down): tracked sun on way to 1st waypoint

Accomplishments: tracked gradients, transit uneventful, tracked Car Circles except at higher altitude

Issues encountered during flight

Status for next flight:

Post flight requirements: 15 mins

AERO 3X

Status during the flight (up/down): good flight, cleaned mirrors during transit

Accomplishments: Aethalometer worked for entire flight

Issues encountered during flight

Status for next flight:

Post flight requirements 30 Mins

BBR

Status during the flight (up/down): Good flight, lap top died once at low level.

Accomplishments: only lost about 5 mins of leg, good radiation runs , good albedo runs at Elson Lagoon

Issues encountered during flight

Status for next flight:

Post flight requirements: 15 mins

CAR

7-May-08

Page | 2 P3 ARCTAS DataFlight#9 Report15Apr2008

Status during the flight (up/down): Thanks to all ,
Accomplishments: good flight, instrument worked throughout flight, BRDFs 600 and 10K. Great support from all
Issues encountered during flight
Status for next flight: Hanger if available
Post flight requirements : 0

CCN

Status during the flight (up/down):good flight:
Accomplishments:
Issues encountered during flight
Status for next flight:
Post flight requirements: 5

COBALT

Status during the flight (up/down): Good Flight,
Accomplishments: good intercomparison with NOAA P-3
Issues encountered during flight: Current controller dropout
Status for next flight:
Post flight requirements: Less than .5 hr

HIGEAR

Status during the flight (up/down):
Accomplishments
Issues encountered during flight flooded the instrument at start of trip, manually siphoned instrument and has been on line after intercomparison
Status for next flight:
Post flight requirements. >5

AMS

Status during the flight (up/down): Good flight
Accomplishments: looking forward to intercomparison flight data, no aerosol discoveries
Issues encountered during flight
Status for next flight:
Post flight requirements .5

PDS

Status during the flight (up/down): good flight
Accomplishments: work well

Issues encountered during flight
Status for next flight:
Post flight requirements >5

REVEAL

Status during the flight (up/down): Outstanding
Accomplishments: nosiy mike, x-chat work, RTMM worked
Issues encountered during flight
Status for next flight:
Post flight requirements ><5

SSFR

Status during the flight (up/down):very good flight 100%
Accomplishments: flux divergence legs with NOAA, measurement of surface albedo around Barrow with CAR & BBR
Issues encountered during flight
Status for next flight:
Post flight requirements

WFF Flight Report

| | |
|--|---|
| Aircraft : | NASA P-3B |
| Operating Site(s) From / To : | PAFA |
| Flight Date : | April 15, 2008 |
| Flight Number / Data Flight # : | 557 / 9 |
| Time out: | 1849 (Z) |
| Time in: | 0259 (Z) |
| Flight Time : | 8.2 |
| Flt Request # / PI: | 8P301/ Phil Russell |
| Purpose of Flight : | Data [X] Ferry [] Functional Check [] Other [] |
| Sensor Payload : | ARCTAS |
| Comments : | Today's science flight very successful – the best day yet. The aircraft and all instruments are in an up status. Outstanding intercomparison flight with NOAA P-3. All objectives met and exceeded on this flight. The rest of the campaign for the P-3 will be determined at tomorrow's science meeting. |

SUBMITTED BY: Dave Easmunt 15 April, 2008

Flight Hours for ARCTAS Campaign

| Flight | Date | Aircraft Flight # | Data Flight# | Duration (hr) | Remaining Hours* |
|-------------------------|-------------|--------------------------|---------------------|----------------------|-------------------------|
| <i>Total Allocated</i> | | | | | 75 |
| Engineering Check Flt 1 | 3/14/2008 | 535 | | 2.8 | 72.2 |
| Engineering Check Flt 2 | 3/24/2008 | 537 | | 2.3 (1.0)* | 71.2 |
| Project Check Flight 1 | 3/25/2008 | 536 | 1 | 3.0 | 68.2 |
| Project Check Flight 2 | 3/27/2008 | 538 | 2 | 3.4 | 64.8 |
| Transit to Yellowknife | 3/31/2008 | 541 | 3 | 7.6 | 57.2 |
| Transit to Fairbanks | 4/1/04 | 542 | 4 | 6.5 | 50.7 |
| Functional check flight | 4/5/08 | 546 | | 0.5** | 50.7 |
| Science flight | 4/6/08 | 545 | 5 | 8.6 | 42.1 |
| Science flight | 4/8/08 | 548-1 | 6 | 8.6 | 33.5 |
| Science flight | 4/9/08 | 548-2 | 7 | 8.7 | 24.8 |
| Science flight | 4/13/08 | 554 | 8 | 5.4 | 19.4 |
| Science flight | 4/15/08 | 557 | 9 | 8.2 | 11.2 |
| Return Transit+ | TBD | | | 10.0 | 1.2 |

+ Estimating 10.0 hours for return transit

* Science only charged 1 hour for ECF #2

** Science not charged for 4/5/08 functional check flight